J. H. WITT.

STRETCHER-FRAME.

No. 192,319. Patented June 19, 1877.

Fig. 1.

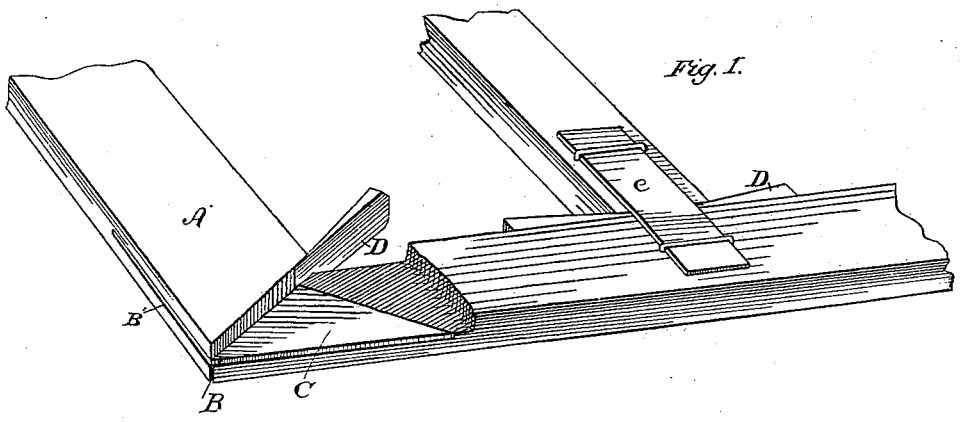


Fig. 2.

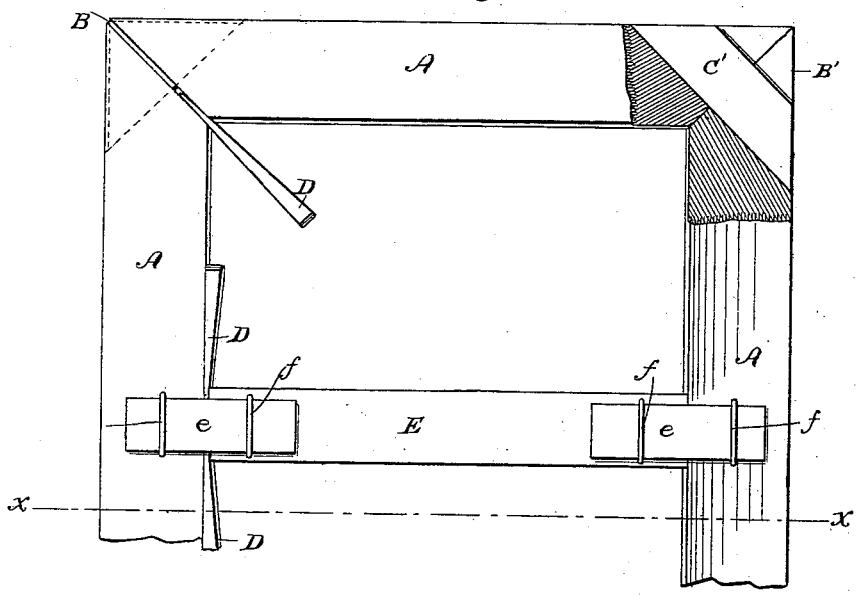


Fig. 3.

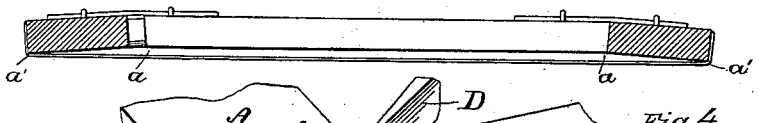
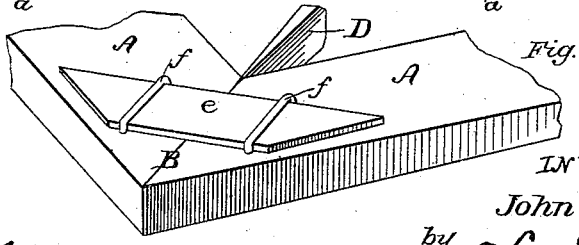


Fig. 4.



WITNESSES

C. Clarence Poole

S. P. Gidelings

INVENTOR

John H. Witt

by L. Deane,

Atty.

UNITED STATES PATENT OFFICE.

JOHN H. WITT, OF COLUMBUS, OHIO.

IMPROVEMENT IN STRETCHER-FRAMES.

Specification forming part of Letters Patent No. 192,219, dated June 19, 1877; application filed April 21, 1877.

To all whom it may concern:

Be it known that I, JOHN H. WITT, of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Stretcher-Frames, of which the following is a specification:

Figure 1 is a perspective, showing a corner or miter joint with portions broken away, and a joint at the brace. Fig. 2 is a top-plan view illustrating more fully the same points. Fig. 3 is a side view on line *x x* of Fig. 2, showing the incline of the sides of the frame or stretcher produced by the bevel of the miter-joint in its relations to the canvas. Fig. 4 is a detail, to show the brace-joint of Fig. 1, adapted as well to the corner or miter joint.

The object of the present invention is to provide a cheaper stretcher-frame for pictures than is now made by the usual method of construction for that and like purposes; and consists, more particularly, in such construction of the joints that a stronger and easily-adapted stretcher-frame can be readily made, and in a simple and economical manner, all as will now be more in detail set out and explained.

In the accompanying drawings, A denotes the usual side strips of a stretcher or frame adapted to any ordinary or usual use, and now shown as more particularly related to a picture-stretcher.

These pieces are made of like depth and width throughout, herein consisting one chief characteristic of my invention, as will presently be more fully explained.

The corner or miter joint B is made by cutting the contiguous ends of strips A, not only so as to form a miter when abutted, but by so forming the faces of the angle on each with a vertical bevel or incline, that when thus abutted or placed in usual position or relation to each other to form a miter-joint, the said strips A shall have an upward or outward incline on their inner edges, as now shown at *a* of Fig. 3.

The object of this construction is to prevent the said inner edges of the stretcher-frame from coming in contact with the canvas when it is stretched over the frame. As now illustrated in Fig. 3, the canvas will come over the outer edge *a'*, where it binds close upon the frame or stretcher; but at *a* there will be left such a clear space between said inside edge and the canvas, caused by the bevel of the frame or stretcher joint as above, that the canvas cannot, under any ordinary conditions of use, be brought against this inner edge. Heretofore, this end has been gained by using stuff for the frame-stretcher sides planed or beveled along its whole upper face—a plan of construction demanding much more time and labor than are required in the construction of my frame or stretcher as above explained.

When the corners have been thus prepared and placed together they are offered to a jig-saw, and a slot, B', is cut, which in size and shape is adapted to hold the metal strip C. This may be triangular, and fill the entire cavity, or have its upper angle removed, as at C'; but any shape will answer, so long as the strip rests easily and closely in the slot and holds the corners together to prevent any springing of the side pieces.

It will be observed that these pieces can be readily cut out of the ordinary sheet metal, and are flat and comparatively smooth on both sides—that is, without protuberance on either face, and thus are easily made, and can be readily adapted in the aforesaid slot.

When, now, the four pieces have been put in position, their corners properly made as above explained, and the canvas has been stretched over the frame-stretcher, it is only necessary, when desired to draw the canvas tight upon the stretcher-frame, to place the wedges D, which are of the ordinary shape and construction, in the several joints, and thus key up the frame to any desired strain or tension, and draw the canvas evenly and smoothly across the face.

For stretcher-frames of any ordinary size, or for portraits of usual size, and landscapes, the construction already explained will be all that is needed; but if a very large stretcher-frame is needed, where interior braces are required, I adopt such a joint as is shown in Fig. 2 to unite the brace and sides of the frame. The brace E buts against the said sides, as usual, and, if desired, another brace may be placed from the upper to the lower side, so as to cross this brace E at the middle at right angles to it, the ends of said cross-

piece at the points of contact with the side pieces being adapted thereto in like manner as the ends of the brace E. In the sides A and brace E are inserted staples *f f*, which serve as guides or holders for the metal strip *e*. These are driven down upon said strips sufficiently close and tight to hold them well in place, and yet allow lateral motion as the wedges D are driven in to key up the stretcher or frame.

The construction as above explained will answer the required ends excellently well; but, if desired, the miter-joint at the corners may be made in substantially the same manner as that above described for the joint of the brace. This method I have now illustrated in Fig. 1, where the metal strip *e* is secured by staples *f f* to the contiguous ends of sides A, so as to allow sufficient movement of said sides at this point, and yet hold them quite as firmly as can be done by the metal strip in the slot cut in the corner.

Having thus described my invention, what I consider new, and desire to secure by Letters Patent, is—

1. In a stretcher-frame, the miter-joint B, having the abutting faces of the strips A cut with a vertical bevel or incline, substantially as and for the purposes described.

2. In a stretcher-frame, A A, the miter-joint B, formed as described, combined with metal strips *e* and staples *f f*, substantially as described.

3. In combination with a stretcher-frame having the abutted faces of strips A in the miter-joint B cut with a vertical incline or bevel and provided with slot B′, the metal strip C and wedge D, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN H. WITT.

Witnesses:

THOMAS C. CONNOLLY,

M. BAILEY.